AMENDMENT TO THE SPECIFICATION

Please replace the paragraph appearing on page 13, lines 5-27 with the following amended paragraph:

Figure ~~3A~~ 3 is a flow diagram which illustrates in more detail the general operation of translation 200 shown in Figure 3. First, translator 200 receives the input phrase 202 in the first language (for purposes of this example, the English language). This is indicated by block 230 in Figure ~~3A~~3.

Pattern probability model 218 then obtains a plurality of possible linguistic patterns 232 associated with the input phrase from bi-lingual pattern data store 210. This is indicated by block 234 in Figure ~~3A~~3. In other words, Figures 4A and 4B better illustrate different patterns which can be assigned to a phrase in a first language. Figure 4A shows a tree for an English phrase (represented by "E"). The nodes D and E on the tree in Figure 4A are non-terminal nodes, while the nodes A, B and C represent terminal, or leaf nodes, and thus, represent the individual words in phrase E. It can be seen from Figure 4A that the phrase E is composed of a non-terminal phrase D and the English word C. The phrase D is composed of the two English words A and B.

Please replace the paragraphs appearing on Page 13, lines 28-page 15, line 9 with the following paragraphs:

Figure 4B illustrates the wide variety of linguistic patterns that can be used in translating the phrase E. Those phrases are identified by numerals 300, 302, 304, 306, 308 and 310. Linguistic pattern 300 illustrates that the translation of phrase E can be formed by translating the phrase D followed by a translation of the word C. Linguistic pattern 302 indicates that the translation of phrase E can be composed of a translation of the word C followed by a ~~translation~~ translator of the phrase D. Of course, since phrase D is actually made up of two words (A

and B) translation of phrase D can also be performed by translating the word A and following it with the translation of the word B, or vice versa. This is indicated by patterns 304 and 306. Patterns 308 and 310 show the same type of linguistic patterns, except where the expanded translation of the phrase D follows translation of the word C.

Therefore, bi-lingual pattern data store 210 illustratively includes a plurality of English phrases (such as phrase E) followed by a corresponding plurality of linguistic patterns in the second language (such as the linguistic patterns set out in Figure 4B) which correspond to, and are possible linguistic translation patterns of, the English phrase E. In step 234 in Figure 3A3, pattern probability model 218 retrieves those patterns (referred to as patterns 232) from bi-lingual pattern data store 210, based on the English input phrase E.

Probability generator 212 then selects one of the linguistic patterns 232 as indicated by block 236 in Figure 3A3. Probability generator 212 then generates a translation probability for the selected linguistic pattern. As will be described in greater detail later with respect to Figure 5, the translation probability is a combination of probabilities generated by pattern probability model 218, translation model 216 and language model 220. The combined translation probability is then provided by probability generator 212 to translator component 214. Calculation of the translation probability is indicated by block 238 in Figure 3A3.

Please replace the paragraphs appearing on page 16, line 5-page 17, line 12, with the following amended paragraphs:

Once translator component 214 receives the linguistic patterns and the associated translation probabilities, it provides, at its output, an indication of the translation of the English phrase E into the second language (in this case, the

Chinese language). This is indicated by block 244 in Figure ~~3A~~3. |
Again, the output from translator component 214 can be done in
one of a wide variety of ways. It can provide different
translations, ranked in order of their translation probabilities,
or it can provide only the best translation, corresponding to the
highest translation probability calculated, or it can provide any
combination or other desired outputs.

Figure 5 is a flow diagram illustrating the calculation
of the translation probability (illustrated by block 238 in
Figure ~~3A~~3) in greater detail. Figure 5 illustrates that pattern |
probability model 218 calculates the pattern probability
associated with the selected pattern. This is indicated by block
246. Figure 5 also shows that language model 220 calculates the
language model probability for the second language, given terms
in the selected pattern. This is indicated by block 248 in
Figure 5. Figure 5 further shows that translation model 216
calculates the translation model probability for the English
language phrase given the terms in the Chinese language phrase
and the selected pattern. This is indicated by block 250 in
Figure 5. Finally, a combined probability is calculated for each
linguistic pattern, as the translation probability, based upon
the pattern probability, the language model probability and the
translation model probability. This is performed by probability
generator 212 and is indicated by block 252 in Figure 5. The
discussion now proceeds with respect to deriving the overall
phrase translation probability based upon the three probabilities
set out in Figure 5.

Please replace the paragraph appearing on page 19, lines
9-21 with the following amended paragraph:
It can thus be seen that Equation ~~9~~ 6 indicates that, |
for each linguistic pattern identified as being a possible
linguistic pattern corresponding to a translation of the input

English text, both the language model probability and the translation model probability are applied. This provides a unified probability that not only includes statistical information, but structural and linguistic information as well. This leads to structural information being reflected in the statistic translation model and leads to an improvement in the quality of the machine translation system.